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Two-stage evaporation of silver samples in a graphite atomizer

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Abstract

A study has been made of the process of separation of silver from the excess in a sample of alkali-earth chlorides and sulfates by two-stage evaporation from the wall of a graphite atomizer and by fractional condensation on its integrated platform. It has been shown that after the condensation on the platform at room temperature the influence of the salts on the signal of atomic absorption is two times higher than that in ordinary one-stage evaporation. The reason for this is the formation of a cloud of condensed salt particles preventing the silver atoms from depositing on the platform. The atoms are deposited on these particles and are removed from the atomizer together with them before the stage of measurement of an analytical signal.

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Keywords

Atomic-absorption analysis, Electrothermal atomization, Fractional condensation, Matrix influence